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THE EFFECT OF THE EXCHANGE RATE AND INTERNATIONAL FACTORS ON THE COMPETITIVE POSITION OF SOUTH AFRICAN WHEAT PRODUCERS

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The principle for local producers is to be competitive if the playing field is level. In the medium to longer term, it is in the consumer's interest to protect local producers against imports, since locally produced wheat will probably be competitive with imported wheat in the long run in view of the expected trends in world prices and exchange rates.

DIE EFFEK VAN DIE WISSELKOERS EN INTERNASIONALE FAKTORE OP DIE MEDEDINGENDHEIDSPOSISIE VAN SUID-AFRIKAANSE KORINGPRODUSENTE

Die vereiste aan plaaslike produseerders is om mededingend te wees wanneer die speelveld gelyk is. Dit is in die verbruiker se belang om plaaslike produseente oor die medium- tot langer-termyn te beskerm teen invoere, want as gevolg van die verwagte neigings in wêreldpryse en wisselkoerse sal plaaslik geproduseerde koring heel moontlik mededingend wees met ingevoerde koring oor die langer-termyn.

1. Introduction

The great number, and especially the diversity of government policies as applied to the wheat industries in various countries render it difficult to answer critical questions pertaining to the effect of policy reform, especially questions regarding trade patterns and prices. The most basic guideline in this regard has always been the comparative theory (Chacholiades, 1981). In terms of this theory, comparative advantage will, in the absence of trade disruptive policies, determine what production, consumption and trade patterns will be. However, at present, agricultural trade is disrupted by protective and supportive measures in various countries. In the pursuit of protection objectives, it is almost impossible to give an opinion as to what the consequences of policy reform or the elimination thereof would be, merely in terms of the theory of comparative advantage.

In terms of the GATT requirements quantitative import restrictions should have been replaced with a tariff system with effect 1 November 1994 (Wheat Forum, 1994). Tariffication means that trade-disrupting measures, as were previously applied, would be scaled down or partially phased out. South African agricultural industries would be affected by this and local industries would be expected also to abolish certain forms of control. Given the trend towards international trade liberalisation it is essential that the factors which influences international competition negatively, be analyzed. The problem centres around two aspects:

- What is the effect of international market distortion through subsidies, supportive and protective measures on the competitiveness of South African wheat producers? and
- How do exchange rate and tariff levels influence the competitiveness of South African wheat producers?

These two aspects are central to determining the international competitiveness of South African wheat producers and it is therefore the aim of this paper to quantify these variables.

2. The effect of exchange rate changes on the production costs of wheat producers

Multiple regression analysis has been applied by Liebenberg (1990) to quantify relationships between the effective exchange rates and prices of agricultural inputs. He calculated elasticities of input price changes in response to exchange rate changes.

The price of imported wheat is directly affected by the exchange rate. The production costs of local producers are, however, also affected indirectly by these changes. This effect varies from one area to the next depending on the input composition and levels of application.

The elasticities of the input price changes have been used to measure the effect of exchange rate changes on the production cost of the wheat industry in various areas. Production costs as calculated by the Directorate of Agricultural Economics (1994) for the various production regions were used in the calculations. The results are summarised in Table 1. Input and output quantities were kept constant at current levels of utilization and only prices were adjusted. This method is not entirely correct since producers may tend to use more or fewer of certain inputs when other inputs become either cheaper or more expensive relative to the other inputs. Because of the lack of substitute elasticities and the marginal advantage it would offer, constant quantity levels were used.

It is clear from Table 1 that the South African RSA wheat producers' competitive position will be eroded if the domestic producer price of wheat remain constant and the South African exchange rate declines. Domestic wheat producers might then insist on an increase in the producer price which is at least equal to the increase in the production costs in order to maintain their position. A decline in the exchange rate will however, increase the cost of imported wheat with exactly the same portion as the percentage decline of the exchange rate.

Table 1 shows that the largest effect of a 10% exchange rate decline will be in Bergville (4,75%), the Natal bioclimates (4,70%) and Vaalharts (4,57%). Producers in the Brits

Table 1: The percentual effect of exchange rate changes on the local wheat producers' production costs

Locality	Change in exchange rate			
	-10%	-20%	-30%	-40%
Swartland (dry-farming land)	+4,29	+8,59	+12,89	+17,16
Vaalharts (flood irrigation)	+4,57	+9,14	+13,71	+18,28
Harrismith (Dry-farming land)	+4,06	+8,12	+12,18	+16,24
Ventersdorp (Sprinkler irrigation)	+3,59	+7,18	+10,77	+14,36
Ventersdorp (centre pivot irrigation)	+3,76	+7,52	+11,28	+15,04
Tomburke (central irrigation)	+4,36	+8,72	+13,08	+17,44
Brits (flood irrigation)	+3,56	+7,12	+10,68	+14,24
Natal bioclimate (irrigation)	+4,70	+9,40	+14,10	+18,80
Bergville (irrigation)	+4,75	+9,50	+14,25	+19,00
Average	+4,18	+8,35	+12,55	+13,67

region will be least affected (3,56%) if the South African exchange rate declines. The results depend on the specific average input composition used by a specific area as documented by the Directorate of Agricultural Economics (1994).

The average figures as indicated in Table 1 are important in the sense that they represent the exchange rate elasticity of the production costs of wheat: a 10% decline in the exchange rate of the Rand will result on average, in a 4,18% increase in the production costs of wheat in South Africa. This elasticity is also important because it also represents the required increase in the producer price of wheat that is needed to place wheat producers in the same position as they were in before the exchange rate decline.

3. The effect of exchange rate changes and trade liberalisation on the costs of imported wheat

The price of imported wheat is affected directly by exchange rate changes. The effect of the exchange rate changes on the cost of imported wheat is important since it may positively influence the competitive position of domestic wheat producers relative to that of other countries.

The basic objectives of the General Agreement on Tariffs and Trade (GATT) are to promote world trade by reducing tariffs and removing other trade constraints (GATT, 1991). This will mean that trade measures such as those which are currently applied will be largely scaled down or possibly partially phased out. It is estimated by Roningen and Dixit (1989) that the world price of wheat will increase with approximately 38% if markets are fully liberalised. Any measure of trade liberalisation that increases the world price of wheat, associated with a decline in the exchange rate will improve the competitive position of South African wheat producers. It is assumed in this study that the recent trade liberalizations has not yet influenced world prices of wheat.

Various scenarios with regard to the competitiveness of South African wheat producers at various centres (Gauteng, Cape Town and Durban) are analyzed in terms of an exchange rate decline and an international price increase.

Scenario 1

International trade liberalisation does not occur, but the RSA exchange rate declines with 10%. The effect of the decline in the exchange rate on domestic conditions is reflected in a 4,18% increase in the domestic producer price of wheat and with an increase of 4,08% in transport costs.

Scenario 2

A large portion of the price distorting effects at the international level are eliminated. Tariffication is also introduced to all agricultural produce. In terms of the GATT, some supportive measures have been excluded from adjustment with the result that the full 38% price increase as referred to earlier is not realised. An increase of 15,2% (i.e. 40 % of 38%) in the world price of wheat has therefore been accepted as more realistic. Exchange rates are kept constant at current levels.

Scenario 3

The world price of wheat increases with 15,2% and the South African exchange rate declines with 10%. Hence this is a combination of scenarios 1 and 2.

The calculations of the different scenarios are shown in Table 2.

According to Table 2, wheat can currently be imported more cheaply than it can be bought locally, i.e. in the entire RSA. The greatest difference between the domestic and import prices occurs in Gauteng (R199,02) with the Western Cape as the domestic supplier followed by Durban (R164,64) with the Free state as domestic supplier. In terms of this, a tariff of at least 33% (based on CF) would be necessary to protect all wheat producers in the RSA against wheat imports. This difference (or tariff required to protect local producers) is partially due to price distortions, viz. input subsidies, price subsidies, *et cetera*, on the international market. The South African agricultural producers are entitled to protection against the negative effects of such assistance on their product prices and sales, both inland and on the international markets. However, the current situation may change drastically if trade liberalisation should be realised. A decline in the exchange rate will further improve the RSA wheat producer's competitive position.

3.1 Scenario 1

With an exchange rate decline of 10% (i.e. to R4,02 per \$), the competitive position of the South African wheat producer improves considerably and reaches reasonable levels in the Cape (Western Cape as supplier) and Gauteng (OFS as supplier). Wheat continues however to be imported at a lower cost than that at which it can be produced domestically. A tariff of at least 26% will be needed in this case to protect all the South African wheat producers.

Table 2: Different possible future scenarios and South African wheat producers' competitive position

Cost items	Cost per tonne under different scenarios			
	Current ^a scenario	Scenario 1	Scenario 2	Scenario 3
FOB Gulf price (\$/t)	145,00	145,00	167,04	167,04
Shipping costs (\$/t)	23,27	23,27	23,27	23,27
R/\$ exchange rate	3,65	4,02	3,65	4,02
CF (R/t)	614,11	676,45	694,63	765,05
Discharge costs (R/t)	50,00	50,00	50,00	50,00
Landed costs (R/t)	665,11	726,45	744,63	815,05
Inland prices:				
Producers price (R/t)	733,26	763,91	733,26	763,91
Net free-on-rail selling price (R/t)	770,50	802,71	770,50	802,71
Transport costs Cape Town: (W. Cape as supplier)				
Western Cape to mill (R/t)	29,91	31,11	29,91	31,11
Cape harbour to mill (R/t)	18,17	18,89	18,17	18,89
Price difference (Inland - imports) (R/t)	117,13	88,48	38,31	-0,12
Tariff needed for protection (% on CF)	19,07	13,00	5,41	0,00
Transport costs Durban: (OFS as supplier)				
OFS to mill (R/t)	75,29	78,30	75,29	78,30
Durban harbour to mill (R/t)	16,04	16,68	16,04	16,68
Price difference (Inland - imports) (R/t)	164,64	137,88	85,12	49,28
Tariff needed for protection (% on CF)	26,81	20,38	12,25	6,44
Transport costs Gauteng: (OFS as supplier)				
OFS to mill (R/t)	45,39	47,21	45,39	47,21
Durban harbour to mill (R/t)	92,37	96,06	92,37	96,06
Price difference (Inland - imports) (R/t)	58,41	27,41	-21,11	-61,19
Tariff needed for protection (% on CF)	9,51	4,05	0,00	0,00
Transport costs Gauteng: (W. Cape as supplier)				
Western Cape to mill (R/t)	186,00	193,44	186,00	193,44
Durban harbour to mill (R/t)	92,37	96,06	92,37	96,06
Price difference (Inland - imports) (R/t)	199,02	173,64	119,50	85,04
Tariff needed for protection (% on CF)	32,41	25,67	17,20	11,12

a) Current = June 1995

3.2 Scenario 2

Imported wheat is still cheaper except in Gauteng with the Free State as supplier. The Free State farmers are thus competitive under this scenario. Only 40% of the trade distorting effects are however eliminated. The difference between the domestic and imported prices is still the largest (R173,64) in Gauteng with the Western Cape as supplier. In terms of this scenario, a price tariff of at least 18% is needed to protect all South African wheat producers against wheat imports.

3.3 Scenario 3

In this scenario, the local wheat producers' competitive position relative to that of imported wheat improves even more. In areas such as Gauteng with the Free State as supplier and the Cape with itself as supplier, no tariff is needed. In order to protect all the South African wheat producers a tariff of 12% would be needed.

4. Tariffication of wheat prices

As part of South Africa's obligations within the Uruguay Round of the GATT, a tariff (ceiling maintenance) has already been submitted for wheat. When a realistic tariff for application is calculated, the question arises as to at what point the protection should be granted. In this paper, Gauteng with the Western Cape as service area were used since this is the area that had the greatest price difference

between domestically produced and imported wheat in all the above scenarios.

As stated before, the South African agricultural producer is entitled to protection against the negative effects of price distorting aid measures on their produce prices and sales, both domestically and at international level. This should also be the exclusive objective of tariff policy: the government of the day should protect local producers against distorting effects of measures instituted by other governments in order to support those producers. The principle is that if all price-distorting measures are eliminated and trade are liberated 100% worldwide, tariffs should be 0% because local producers would then not have any claim to protection. The principle for local producers is to be competitive if the playing field is level, i.e. if there are no interference or support elsewhere in the world. This is a principle to which producers are rightfully entitled.

The other side of the coin is the consumer. In his or her turn, the consumer may rightfully claim that food should be as cheap as possible, which implies that it may also be imported if this is cheaper than the locally produced product.

These two apparently opposing views constitute a dilemma for any policy-maker. The government of the day should, however, balance the two poles in terms of who or what is most important: the consumer and cheap food, or the producer and aspects such as job creation. This balance is not clear-cut and varies to the degree to which objectives

differ. In South Africa, however, it is clear that increasing emphasis is being placed on the needs of the consumer. In this regard, the availability of affordable food within a policy of food security is probably a priority of the government. The latter is especially important to a staple food such as wheat. Sartorius von Bach and Van Rooyen (1995) also states that countries in the Southern African region place great emphasis on food security. In order to determine to what degree these two views oppose each other and are in conflict with each other, it is necessary for two important aspects to be brought into account:

- First, it is essential that a longer-term view be taken. It takes years to develop production capacity in agriculture, but at the same time, this capacity could be destroyed in a very short time by large-scale agricultural imports. For this reason, it is important that short-term benefits should not be pursued, just to find out that a higher price will have to be paid for the same product over the medium and long term. In this regard, it is important for the consumer to be protected from him/herself. The question is: What is in the interest of the individual consumer over the longer term? Against the above background of food security and cheap food, especially as regards to a staple food such as wheat, the answer is fairly clear. The alternative that is best for the consumer is the one that will ensure the cheapest food, not only in the short term, but in the long term as well.
- If the above is accepted, it is secondly important to look at factors influencing local wheat producers competitiveness *vis-a-vis* imported wheat, as well as how these factors are likely to vary in future. The two main factors that will influence local wheat production's competitiveness *vis-a-vis* imported wheat are undoubtedly the world price of wheat and the exchange rate. Hence it is important to analyze how these factors are likely to change in the medium term, as well as the effect of such changes on the competitiveness of locally produced wheat.

This argument implies that, viewed over the longer term, the objectives of consumers (cheap food) and of producers (no wheat imports) are not necessarily opposed to each other, but that they are one and the same thing. In the medium to longer term, it is in the consumer's interest to have available locally produced wheat because since it will probably be competitive with imported wheat in the long run in view of the expected trends in world prices and exchange rates. This entails the fact that it is not necessarily in the consumer's interest that wheat should now be imported on a large scale at lower prices. Wheat imports can destroy existing production capacity to such an extent that the wheat industry will not be able to meet the demand in three to four years when competitiveness has recovered. The consumer will then again want the cheaper local product but it will not be available. In terms of the scenario that has been sketched (Table 2), it would not be in the consumer's interest in the medium or longer term that wheat is now being imported at a high level. Hence it corresponds with the interest of wheat producers.

This has important implications for determining tariff levels at present because it implies that local production capacity has to be maintained fully, especially in the interim period until more certainty has been obtained about the actual trends in world prices of wheat and the exchange rates.

5. Conclusion

World prices of agricultural commodities would generally increase on average with 22% if industrial countries should stop all support to agricultural producers (Roningen and Dixit, 1989). This represents the distorting effect of such measures. According to the above principles, South African farmers are entitled to governmental and other protection against these distortions that arise directly from support to agriculture in other countries. It is their right to insist on level playing fields. In this regard, it is only fair that the average price of South African agricultural products, with the necessary adjustments for transport and other relevant marketing costs should at least reflect this reality. Domestic prices should be equal to non-distorted world prices plus shipping costs to South Africa; export prices should be equal to non-distorted world price less transport costs. Only if these conditions are met, will it at all be possible to speak of an level playing field for producers.

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